

ANNEX 4: NUTRIENTS

2016

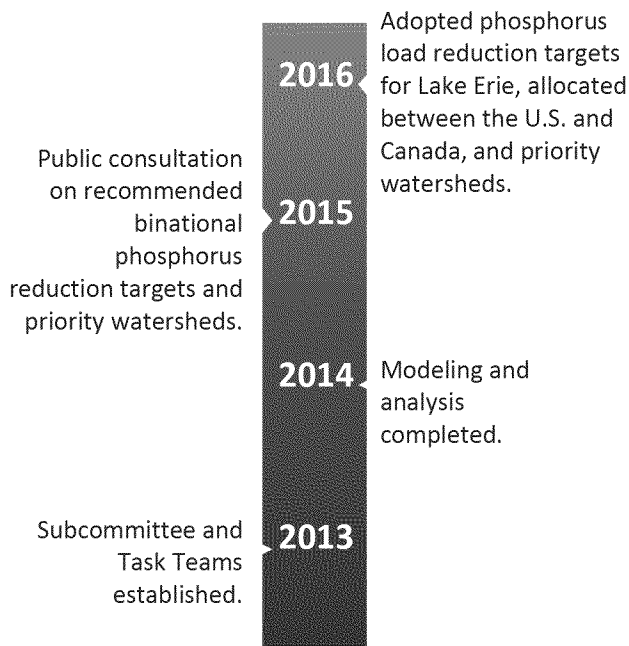
PROGRESS REPORT OF THE PARTIES

Overview

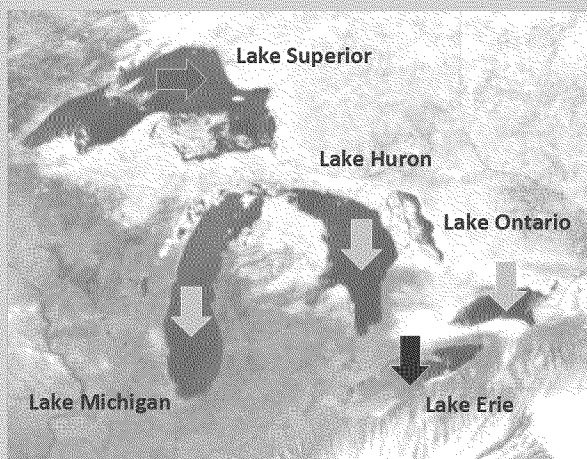
In the Nutrients Annex of the 2012 Great Lakes Water Quality Agreement (GLWQA), Canada and the United States commit to coordinating binational phosphorus loads and concentrations in the Waters of the Great Lakes. The Nutrients Annex requires Canada and the United States to establish phosphorus reduction targets, allocated by country for the nearshore and open waters of Lake Erie by 2016. Domestic Action Plans to achieve the targets must be developed by 2018.

On _____, 2016, Canada and the United States adopted the binational phosphorus reduction targets in Table X. The Nutrients Annex Sub-committee is working to meet the Domestic Action Plan deadline.

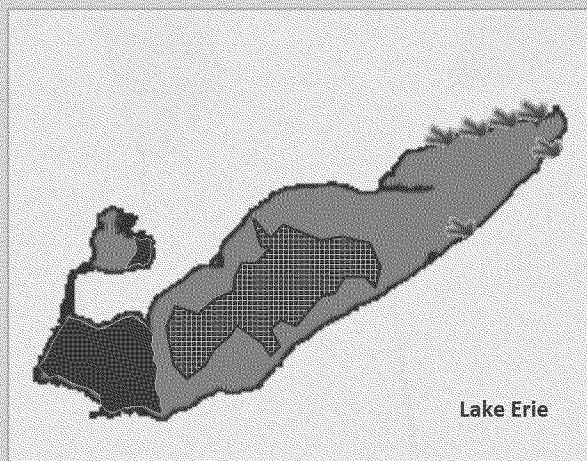
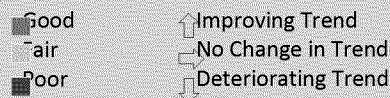
Progress Toward Meeting GLWQA Commitments



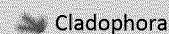
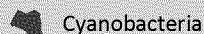
Lake Erie Most Impacted & Our Highest Priority



Nutrients Assessment in each of the Great Lakes:



Harmful and Nuisance algae:



"Dead Zone" low oxygen:



Fish cannot live in summer.

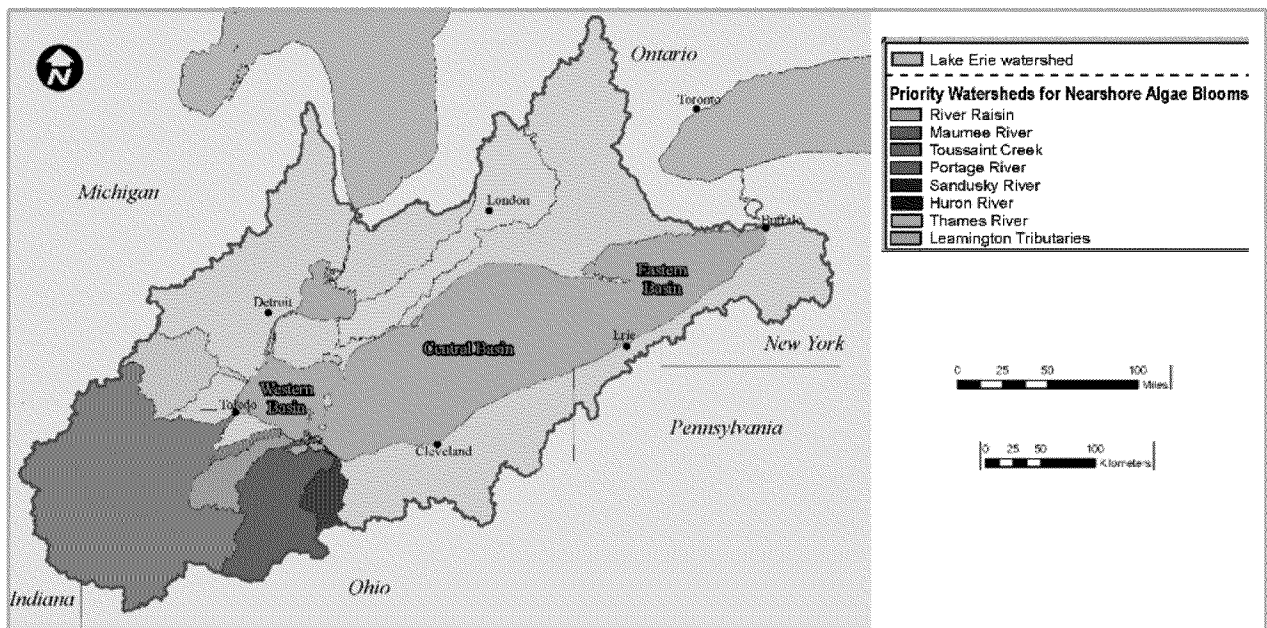
This annex is implemented by the Nutrients Annex Subcommittee, co-led by Environment Canada and the United States Environmental Protection Agency. Organizations on the subcommittee include:



Table X - Binational Phosphorus Load Reduction Targets

Lake Ecosystem Objectives (as outlined in the 2012 GLWQA Annex 4 Section B)	Western Basin of Lake Erie	Central Basin of Lake Erie
Minimize the extent of hypoxic zones in the Waters of the Great Lakes associated with excessive phosphorus loading, with particular emphasis on Lake Erie	40 percent reduction from 2008 levels in total phosphorus entering the Western Basin and Central Basin of Lake Erie to achieve 6000 MT Central Basin load. This amounts to a reduction from Canada and the United States of 212 MT and 3,316 MT, respectively.	
Maintain algal species consistent with healthy aquatic ecosystems in the nearshore Waters of the Great Lakes	40 percent reduction in spring total and soluble reactive phosphorus loads from the following watersheds where localized algae is a problem: Thames River - Canada Maumee River - U.S. River Raisin - U.S. Portage River - U.S. Toussaint Creek - U.S. Leamington Tributaries - Canada	Sandusky River - U.S. Huron River, OH - U.S.
Maintain cyanobacteria biomass at levels that do not produce concentrations of toxins that pose a threat to human or ecosystem health in the Waters of the Great Lakes	40 percent reduction in spring total and soluble reactive phosphorus loads from the Maumee River (U.S.)	N/A

- Canada and the United States identified eight priority watersheds – two in Canada and six in the United States – for phosphorus control to address algal blooms occurring in the nearshore waters of Lake Erie.
- Canada and the United States identified Phosphorus load contributions from major tributaries for 2008 water year.



- {talk about binational priorities for research, monitoring and modeling here}
- Cladophora as an area for further research ...
- To address nuisance Cladophora in the Eastern basin of Lake Erie, Canada and the United States committed to the following actions:
 - ✓ Outcome of Cladophora workshop
 - ✓ Outcome of Environment Canada research
 - ✓ Are we recommending est. a Clad mon program?



- Canada and the United States drafted Binational Phosphorus Reduction Strategy and sought public input. The strategy identifies binational priorities for research and monitoring, with a focus on coordinating our efforts to track progress through an active adaptive management process.
- Canada and the United States developed common elements for Domestic Action Plans and shared with stakeholders/sought public input.
- Canada and the United States identified existing programs to reduce phosphorus loadings from municipal and agricultural point and nonpoint sources.

Domestic Actions Taken



{Canada's text here}



The U.S. has several permitting and funding programs to reduce phosphorus loadings from municipal, industrial and agricultural sources. For example, through FY14, EPA's Great Lakes Restoration Initiative (GLRI) and Nonpoint Source Program funded over 410 nutrient reduction projects in the Maumee River watershed. These projects, administered by USDA, States, and other partners, will reduce {insert estimated load reductions} sediment and nutrients entering Lake Erie. State environmental and agricultural programs establish discharge limits and comprehensive nutrient management plans to manage nutrient pollution.